PMPJA.com Visit our website for a complete line of products

LED Grow Light

34765 LA | \$8.95 ea

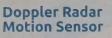
USB-SS 3.0 Cable

Blue & Red LEDs for Best Plant Response.

> 110VAC Input

34600 CB \$4.95 ea





34685 MP | \$1.95 ea



Variable Frequency **Pulse Generator**

34758 MP | \$7.95 ea



1Hz to150KHz Variable Frequency & Pulse Width

Load Cell For Microcontrollers



50W LED Modules



34767 OP Cool White 110VAC Input 34768 OP Warm White \$12.95 ea

Temperature Controller

34757 MP | \$8.95 ea



SMD LEDS

Pack of 10 pcs

3m withType A Males Both Ends



34770 OP Red 34772 OP Green 34777 OP C-

3W

34775 OP Blue \$3.95 | Pack 34773 OP Red

20mm Pointer Control Knobs



Pack of 6 Colors 34787 KN | \$2.95/Pack

3 Axis Joystick

34790 MI 5K Ohm 34791 MI 10K Ohm

\$19.95 ea P/B Switch



Component Flush Cutters



Red & Black Test Leads

34968 TE | \$8.95 pair



Micro Pushbutton **Switches**

2ea of 7 Colors



34890 SW | \$1.95 Set

12VDC Power Panel

Water Resistant



USB Charger

34816 MI | \$24.95 ea

12VDC Battery Monitor

34899 ME

\$19.95 ea LED Bargraph

Stereo Audio Switch



34815 CB

-50 to

+110 "C"



Lighter Plug Cord

Set

Light Sensitive Relav 34696 MP | \$4.95 ea



Our Most Popular Products

Visit us at www.mpia.com for complete line of products

Uno-R3 Compatible Micro Controller Kit

30297 MP | \$19.95 ea

includes Power Supply & USB Cable Accepts all Plug-in modules for Arduino controller. Information & Freeware available through www.arduino.cc.en and others on-line. Includes Power Supply & USB Cable Accepts all Plugin modules for Arduino controller. Information & Freeware available through www.arduino.cc.en and others on-line.



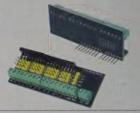
UNO-R3 Protective Case

32182 MP | \$2.95 ea



Nano V3 Compatatible Micro Controller

31354 MP | \$9.95 ea



Arduino

UNO Terminal Shield

Board 32799 MP | \$5.95 ea

Perfboard Terminal Arduino Compatible Shield 32797 MP | \$5.95 ea



Solderless Breadboard, Arduino Compatible Shield 32400 MP | \$8.95 ea



Pro Mini Compataible Micro Controller 31355 MP | \$4.95 ea



Arduino ProMini Clone with headers

Nano Terminal Shield Board 32796 MP | \$4.95 ea



Nano Shield W/ Wireless Expansion 33324 MP | \$8.95 ea



Arduino ProMini Clone with headers & Wider Voltage Range. Get the same power as the UNO, or Nano in a low cost and small footprint. Features a Atmega328, 8bit, 16mHz processor, built in 5V regulator, 8 analog inputs and up to 14 digital I/O pins. Information & Freeware available through www. arduino.cc.en and others on-line.

& Wider Voltage Range. Get the same power as the UNO, or Nano in a low cost and small footprint. Features a Atmega328, 8bit, 16mHz processor, built in 5V regulator, 8 analog inputs and up to 14 digital I/O pins. Information & Freeware available through www. arduino.cc.en and others on-line.

Mega R3 Compatible Controller

33311 MP | \$19.95 ea

Compatable with most existing Duemilanove & Dieci program, shield & IDEs The Mega is major step up in processing power. Information & Freeware available through, forums, www.arduino.cc.en, & others on-line.



Mega Prototyping Breadboard

31547 MP | \$9.95 ea



Mega I/O Sensor Shield V2.0 31060 MP | \$12.95 ea



Iduino Starter Upgrade Kit

33312 MP | \$39.95 ea

This is a upgrade version UNO R3 compatible starter kit, with added components to achieve more features and experiments. Includes Links to Data sheets. Information & Freeware available through, forums, www.arduino.cc.en, & others on-line.



Iduino Rfid Starter Upgrade Kit

33313 MP | \$55.95 ea

This is a UNO R3 compatible starter kit, with added components for RFID Includes Links to Data sheets and information. available through, forums, www.arduino.cc.en, & others on-line.



65 Pcs. Molded **Jumper Set** 30116 PL | \$3.95 ea



40 Pcs. Male To Male Jumper Set 31217 PL | \$3.95 ea



40 Pcs. Female To Female Jumper Set 30117 PL | \$3.95 ea



40 Pcs. Male To Female Jumper Set 31218 PL | \$2.72 ea



Arduino 37 pc. Sensor Starter Kit 33317 MP | \$35.95 ea

Sensor kit for general use with Arduinos and other microcontrollers This 37pc. kit is ideal for Classrooms or Instructional Labs. Includes Handy latching compartment storage box and Experimenter's Manual covering Sketches & use with the Arduino



Raspberry-Pi-2B Starter Set

32670 MP | \$75.95 ea

Raspberry-Pi 2

Aluminum Case

32593 MP | \$24.95 ea

Raspberry-Pi-2B Controller with Heavy Duty Aluminum Case, Fan & Power Supply Full featured 32 bit, Raspberry-Pt 2 Model B. This small card sized microcomputer Features: Broadcom's BCM2836 SOC 900mHz processor,1GB RAM and VideoCore IV 3D Graphics core Requires you to download an Operating System to your SD Card Software: Full range of ARM



GNU/Linux distributions NOOBS, Raspbian, Pidora, Windows10 (Fall of 2015)

9 pcs. Gas Sensor Kit 32507 MP | \$24.95 set



MQ-Series gas sensors coupled with a LM393 IC. 4 pin connections. Can be interfaced to an Arduino or other micro controllers, Includes 1 ea Sensor

module MQ-2 Combustable Gas Sensor MQ-3 Ethanol Alcohol Sensor MQ-4 Methane Gas Sensor MQ-5 Natural Gas Sensor

MQ-6 Propane-Butane Sensor MQ-7 Carbon Monoxide Sensor MQ-8 Hydrogen Gas Sensor MQ-9 Methane-Propane Sensor

5V Dual Relay Board 32442 MP | \$3.95 ea



12V Quad Relay Board, Isolated 33330 MP | \$7.95 ea



Raspberry-Pi 5M Pixel Camera Module

31178 MP | \$29.95 ea



28 Pin GPIO Breakout

Breadboard Kit for

Raspberry-Pi 33050 MP | \$10.95 ea

Raspberry-Pi 5M Pixel Camera Module



2.4 GHz WIRELESS TRANSCEIVER

MQ-135 Air Quality Sensor

31572 MP | \$3.95 ea



5V 8 Channel Relay Board 33329 MP | \$10.95 ea



OPTO Interrupter Sensor



Current Sensing Module 5Amp | 31584 MP | \$4.79 ea 20Amp | 31944 MP | \$4.79 ea

30Amp | 31586 MP | \$4.79 ea



5V Gearhead Stepper and ULN2003 Driver Board

31592 MP | \$4.95 ea



Moisture Sensor



Ultrasonic Ranging Module 19605 UT | \$3.31 ea



Use with Microcontrollers

USB to RS-232 Arduino Bridge Control, CP2102



Humidity Sensor



RFID/NFC Reader/ Writer 31111 MP | \$8.95 ea



I/R XMIT/Receiver Pair 32352 MP | \$3.95 ea

Add Remote Control to Microcontrollers



8X8 Programmable **Red LED Matrix**

34563 MP | \$3.95 ea

Programmable Digital Thermostat "C"

32709 MP | \$9.95 ea



Thermostat, Auto Heat/Cool, "C" 32964 MP | \$13.95 ea



Digital Temperature Controller

32184 MP | Celsius | \$5.95 ea 32764 MP | Fahrenheit | \$6.95 ea

Compact digital thermostat with isolated relay output and 3digit 0.28" LED display. Features: Programmable set Points, Cool or Heat control, Hysteresis, Delay and High Temp. Alarm. Power: 12VDC Current: ~65mA Relay energized Accuracy: Measurement: 0.1deg.

Relay: SPST-NO 20A/14VDC; 20A/125VAC Sensor: NTC waterproof probe (12in. leads) Terminal Strip for Power & Relay contacts.



High Temterature Thermostat 34687 MP | \$12.95 ea

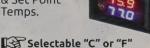


-30 to 999 Deg "C"

Mini Electronic **Thermostat**

32934 MP \$12.95 ea

Shows Ambient & Set Point Temps.



4 X 20 Character LCD

31164 MP | \$9.95 ea



Parallel Interface

Serial 2 X 16 Character LCD

31164 MP | \$9.95 ea



Temperature Controller

34757 MP | \$8.95 ea



Thermostat with Timer



Selectable "C" or "F"

Doppler Radar Motion Sensor

34685 MP | \$1.95 ea



Programmable Security Key Pad

31928 SC | \$49.95 ea



Motion Detector with Light Sensor

31227 SC | \$3.95 ea



12VDC 0-10 Sec. Time **Delay Relay Module**



Perfboard Shield Kit

32795 MP | \$4.95 ea



Motor Shield Board

30292 MP | \$10.95 ea



Motion Detector Mini Module

32061 SC | \$3.95 ea



Powered Breadboard

32920 TE | \$49.95 ea



Sensor Shield 31058 MP | \$7.95 ea



2 X 16 LCD Shield 31059 MP | \$11.95 ea



PIR Relay Module 32183 SC | \$5.95 ea



Adj. Pulse Generator

31070 MI | \$5.95 ea



Dual Audio Amplifier 32705 MP | 50Watt | \$14.95 ea



14 Watt Audio **Amplifier**







Solder Stations

Visit www.mpja.com for Complete Product Line

General Purpose Solder Station

15860 TL | \$16.95 ea

Adjustable from 5 to 50 Watt (800 deg. F max) Station provides on-off switch, knob to control wattage, built-in stand, tip cleaning sponge & 1/32" point tip. 115 VAC

For replacement tips and handle visit our website www.mpja.com



Temperature Controlled Solder Station

15845 TL | \$48.95 ea

Temperature controlled soldering station with LED display. Heat sensor located near the tip for fast response and +-10 deg. "F" control. Rated at 48Watts, 24Vac handle. Temperature range: 320 deg. "F" to 800 deg. "F". Isolated tip, fused line. 117 VAC. For replacement tips and handle visit our website www.mpja.com



Circuit Board Work Holder 33800 TL | \$7.95 ea



LED Lighted Soldering Iron 17516 TL | \$5.95 ea



Replacement Tip Available

SMD Hot Tweezer Adapter 15847 TL | \$12.95 ea



Replacement Handle 15846 TL | \$6.95 ea



For 15845 TL station Only!

Soldering Iron Set 32234 TL | \$14.95 ea



Soldering Iron Kit 16431 TL | \$7.95 ea



Desoldering Iron 16922 TL | \$6.95 ea



- Built in Solder Sucker

Hobby Solder Station 19154 TL | \$17.95 ea



Ball Style Tip Cleaner

34716 TL \$5.95 ea



Benchtop Smoke Absorber

15166 TL \$32.99 ea



Desoldering Station for Circuit Repair

19034 TL | \$119.95 ea

Economical desoldering station designed for use with lead free solders. Ergonomic pistol grip Head with trigger for rapid removal of solder. Displays both the Set Point & the Actual Tip temperature. Temp. Range: 160-480Deg. "C" Watts: 80W running/130W cold start heat-up Power: 115VAC/60Hz.

Features: Internal vacuum pump, LCD Display, electronic temperature control, PTC Ceramic Heater, Readout in "F" or "C". 3ft. cable/hose length. Includes: 0.8, 1.0 & 1.3mm tips & 3 filter/traps. Replacement parts Available at www.mpja.com



Hot Air Rework Station 16121 TL | \$99.95 ea

Hot air repair/rework station for SMT devices. Features: a fast heating ceramic heater, internal air supply, stable temperature, comfort grip handle, interchangeable hot air nozzles for PLCC/SOP/ etc. devices. Adj. air flowand temperature. Temperature range: 150 deg.-500deg. "C".

16123-TL QFP 10 X 10 (mm), 16124-TL QFP 14 X 14 (mm), 16122-TL Single 2.5mm Dia., 16128-TL Single 4mm Dia.

Visit www.mpja.com for more nozzles



Solder Station



32580 TL | \$59.95 ea

Solder 60/40 Rosin Core 33593 TL | 1mm | \$9.95 ea 33594 TL | .6mm | \$9.95 ea



Mini Solder Sucker

20041 TL | \$3.95 ea

Antistatic Solder Sucker 15859 TL | \$6.95 ea



10gm 63/37 Solder 32775 TL | \$1.99 ea



DMM, Power Supply and Solder Station 28901 TL | \$125.95 ea

Technician work station with Soldering station, Digital Meter & Adjustable Power Supply. CE listed Includes: Meter Probes, Power supply clip leads, Soldering Iron stand.





260pcs Electrolylic Capacitor Assortment 32531 CR | \$10.95 ea



400pcs Monolythic Ceramic Capacitor Assortment

32534 CM | \$10.95 ea

50V



360pcs TO-92 Transistor Assortment 32376 QT | \$8.95 ea



150pcs Brass

Standoff Kit 33401 HD | \$3.95 ea



Kit Assortments

520pcs 1/4W Resistor Assortment 32037 RS | \$4.95 ea



65pcs Variable Resistor Kit Horizontal Mount



50pcs Variable Resistor Kit Vertical Mount

32358 VR | \$3.95 ea



88pcs Nylon Standoff Kit 33372 HD | \$4.95 ea

M3-0.5 threaded



2600pcs 1/4W Resistor Assortment

33418 RS | \$14.95 ea Values!!



70pcs 16VDC **Electrolylic Capacitor** Assortment

32532 CR | \$5.95 ea



50pcs Variable Resistor Kit Vertical Mount

32809 VR | \$12.95 ea



50pcs Resettable Thermal Fuses Kit

33414 FU | \$5.95 ea



230pcs 2W Resistor Assortment

32763 RS | \$9.95 ea



190pcs Polyester Cap Kit

33416 CR | \$6.95 ea



100pcs Ceramic Capapacitor Kit

33413 CR | \$3.95 ea



50pcs GMA (5X20mm) **Fuse Assortment**

32762 FU | \$4.95 ea



255pcs Diode and Rectifier Assortment

33412 DI | \$6.95 ea



140pcs 1/2W Zener **Diode Assortment**

33028 DI | \$3.95 ea



70pcs 1W Zener Diode Assortment

33027 DI | \$4.95 ea



6 colors SPST-NO **Pushbutton Button Set**

32728 SW | \$1.95 ea



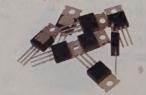
58pcs Plastic Gear Assortment

32185 HD | \$7.95 ea



8pcs 5-24V Positive Voltage Regulators Kit

32375 RG | \$2.95 ea



80pcs 78L Series Positive Voltage Regulator Kit

33417 RG | \$4.95 ea



60pcs 79L Series Negative Voltage Regulator Kit

33415 RG | \$4.95 ea



Selectable Output Bench Supply

29902 PS | \$16.95 ea

P/N: 9902-PS Input: 90-250VAC 60Hz Outputs: 3,4.5, 6, 7.5,9,12VDC @ 2000mA Selectable Specifications/Features: Enclosed, Benchtop regulated, switching supply. Switch selectable output, Front panel Power switch, Select switch & Binding posts. 6ft. 2 wire input power cord



0-15VDC @ 1A Linear Bench Supply 29319 PS | \$32.00 ea



0-60VDC @ 10A Linear Bench Supply 29960 PS | \$279.95 ea



0-30VDC @ 3A Linear **Bench Supply**

29601 PS i \$99.95 ea

with 2 blade plug.



0-50VDC @ 3A Linear **Bench Supply** 29612 PS | \$109.95 ea



Dual 0-30VDC @ 3A Bench Supply

29623 PS | \$169.95 ea

Input: 110 VAC 60Hz Outputs: #1: 0-30VDC @ 0-3A

#2: 0-30VDC @ 0-3A #3: 5VDC @ 3A fixed Dual Constant Voltage or Current supply with 4 LED meters that displays Volts & Amps. Selectable Independent, Series or Parallel operation of Adj. supplies (0-60V/3A or 0-30V/6A). RMS ripple: 20mVp/p (CV) 50mAp/p (CC) Front panel output Binding Posts. Metal case & rubber feet. Internal Temp, controlled fan



0-18VDC @ 3A Linear Bench Supply

29600 PS | \$64.95 ea Input: 110 VAC 60Hz

Output: 0-18VDC @ 0-3A

Constant Voltage or Current

Specifications/Features: True Constant Current (Can a short) Enclosed Linear bench supply with dual LCD displays for output Volts & Amps. .01%+3mV Line /.02%+3mV Load regulation, <1mV RMS ripple. Front binding posts. Metal case & rubber feet. Internal Temp. controlled fan.



0-30VDC@3A Switching Bench Supply

29616 PS | \$53.95 ea



0-30VDC @ 5A Switching Bench Supply



0-30VDC @ 10A Linear Bench Supply

29604 PS | \$189.95 ea



0-30VDC @ 24A Switching Bench Supply 29317 PS | \$259.95 ea



0-30VDC @ 10A Switching Bench Supply

29631 PS | \$109.95 ea

Input: 110 VAC 60Hz

Output: 0-30VDC, 0-10A Constant Voltage/Current

Specifications/Features: Adjustable Voltage/ adjustable Current limit. Enclosed regulated switching bench supply with backlit LCD display for output Volts & Amps. 0.2% +10mV Line/0.2%+5mV Load regulation, <100mV RMS max ripple, Binding Posts Out



0-120VDC @ 3A Linear Bench Supply

29313 PS | \$285.95 ea

Input: 110 VAC 60Hz Output: 0-120VDC @ 0-3A

Specifications/Features: Regulated Bench

supply with Adjustable Current limit. LED meter displays Volts & Amps. Push button switch connects supply to load. Multi turn Voltage control for precise settings. 5mV RMS ripple. Front panel output Binding Posts & Terminal strip for remote Voltmeter Sensing at the load.



0-120VDC @ 1A Linear Bench Supply

29312 PS | \$139.95 ea



0-30VDC@19A Linear Bench Supply

29950 PS | \$289.95 ea



0-50VDC @ 30A Linear **Bench Supply**

29970 PS | \$745.00 ea



Note: Very Heavy Power Supply Must Be Shipped By Motor Carrier (Truck)

0-30VDC @ 16A Switching Bench Supply 29316 PS | \$169.95 ea



Handheld Adjustable Supply

32577 PS | \$149.95 ea

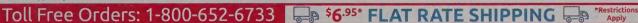
P/N: PS2002H

Input: 90-265VAC 50/60Hz Output: 0-30VDC @ 50W Limits:3.75A @12V 1.6A @ 30V

Handheld switching supply with backlit LCD display and Adjustable Current Limit. Output Oo/Off button, USB Select button, Store & Recall function Button, Adjust Up/ Down Buttons. Output Adjustable in 10mV/ 10mA increments.







Industrial DC Supplies

GENERAL SPECIFICATIONS RoHS Compliant



High reliability line of power supplies designed to operate over the wide range of AC power found world wide.

- Overvoltage, Overcurrent, Short Circuit Protected
- No minimum load UL/canada/usa/CE listed.
- 100% Full Load Burn-in Tested Full rated to 50°C

MTBF: 100,000 Hours

Operating Temp. & Humidity: -10° C to +50° C

20%-93% Non Condensing

Storage Temp. & Humidity: -20° C to +85° C

20%-95% Non Condensing

Cooling: Convection

Approvals/Standards: cULus Ref. No.: E22014

Safety: GB4943, UL60950, EN60950 EMC: GB9254, EN55022 class B, EN55024

-3-2/3 EN61000-4-2/3/4/5/6/8/11

Line Regulation (Full Load): < +/- 0.5% Load Regulation: .05% (0-100%) Inrush Current: 20A/115V, 40A/230V Input Leakage Current: <0.7mA @ 230VAC

Output Adjustment Range: +/- 10%
Overload Protection: 40/60W:110-150%-100/150W: 110-130%

Over Voltage Protection: 115-150% Rise Time: 50mS Full Load (Typical) Hold Up Time: 20mS Full Load (typical)

Withstand Voltage (1 Min.): Input to Output: 3.0KV AC

Input to Frame/Ground: 1.5KV AC Output to Frame/Ground: 0.5KV AV

15W SUPPLIES



STOCK #	OUTPUT	PART#
18438-PS	5V/3A	HF15W-SPL-5
18439-PS	12V/1.3A	HF15W-SPL-12
18440-PS	24V/0.6A	HF15W-SPL-24
18441-PS	48V/0.3A	HF15W-SPL-48

Qty: 1-9 \$15.99 ea | Qty: 10-99 \$14.95

Input: 85-264 VAC 47-63Hz Universal L: 4.0" W: 1.82" H: 1.0" Wt: .2lb

100W SUPPLIES



310CK#	OUTPUT	PARI#
16010-PS	3.3V/20A	HF-100W-SF3.3
16011-PS	5V/20A	HF-100W-SF5
16012-PS	7.5V/13.5A	HF-100W-SF7.5
16014-PS	15V/6.7A	HF-100W-SF15
16016-PS	48V/2.2A	HF-100W-SF48
Otv: 1-9	\$26.50 ea O	ty: 10-99 \$25.60

 STOCK #
 OUTPUT
 PART #

 16013-PS
 12V/8.5A ← HF-100W-SF12

 16015-PS
 24V/4.5A HF-100W-SF24

Qty: 1-9 \$21.69 ea | Qty: 10-99 \$18.95

Input Selectable: 85-132 VAC 47-63Hz 170-264 VAC 47-63Hz L: 7.83" W: 3.86" H: 1.54" Wt: 1.5U

25W SUPPLIES



21068 #	001101	TOREST W
17320-PS	3.3V/6A	HF25W-SL-3.3
17321-PS	5V/5A	HF25W-SL-5
17322-PS	12V/2.1A	HF25W-SL-24
17323-PS	15V/1.7A	HF25W-SL-15
17325-PS	48V/0.57A	HF25W-SL-48

Qty: 1-9 \$14.90 ea | Qty: 10-99 \$12.60

Input: 85-264 VAC 47-63Hz Universal L: 3.88" W: 3.23" H: 1.38" Wt: .6lb

150W SUPPLIES



STOCK #	OUTPUT	PART #
16017-PS	5V/30A	HF-150W-SF5
16018-PS	7.5V/20A	HF-150W-SF7.5
16019-PS	9V/17A	HF-150W-SF9
16033-PS	28V/5.5A	HF-150W-SF28
16034-PS	36V/4.2A	HF-150W-SF36

Qty: 1-9 \$28.60 ea | Qty: 10-99 \$27.95

STOCK #	OUTPUT	PART#
16020-PS	12V/12.5A	HF-150W-SF12
16032-PS	24V/6.5A	HF-150W-SF24

Qty: 1-9 \$26.85 ea | Qty: 10-99 \$23.69 Input Selectable: 85-132 VAC 47-63Hz

170-264 VAC 47-63Hz L: 7.83" W: 4.33" H: 1.97" Wt: 1.6lb

40W SUPPLIES



STOCK #	OUTPUT	PART #	
16000-PS	5V/8A	HF-40W-SL5	
16001-PS	12V/3.5A	HF-40W-SL12	
16002-PS	15V/2.8A	HF-40W-SL15	
16003-PS	24V/1.8A	HF-40W-SL24	
16004-PS	48V/0.8A	HF-40W-SL48	

Qty: 1-9 \$16.00 ea | Qty: 10-99 \$15.49

Input: 85-264 VAC 47-63Hz Universal L: 5.08" W: 3.86" H: 1.57" Wt: 1.1ll

60W SUPPLIES



STOCK #	OUTPUT	PART#	
16005-PS	5V/12A	HF-60W-SL5	
16006-PS	12V/5A	HF-60W-SL12	
16007-PS	15V/4A	HF-60W-SL15	
16008-PS	24V/2.5A	HF-60W-SL24	
16009-PS	48V/1.3A	HF-60W-SL48	

Qty: 1-9 \$19.95 ea | Qty: 10-99 \$18.90

Input: 85-264 VAC 47-63Hz Universal L: 6.3" W: 3.86 H: 1.54" Wt: .1.2lb

240W SUPPLIES



310CK W	OUTFUT	PART#
18434-PS	5V/40A	HF-240W-SF5
18437-PS	48V/5A	HF-240W-SF48
Otv: 1-9	\$45.00 ea	Otv: 10-99 \$38.90

STOCK#	OUTPUT	PART #
18435-PS	12V/18A	HF-240W-SF12
18436-PS	24V/10A	HF-240W-SF24

Qty: 1-9 \$34.95 ea | Qty: 10-99 \$32.49

Input Selectable: 85-132 VAC 47-63Hz 170-264 VAC 47-63Hz L: 7.83" W: 4.33" H: 1.97" Wt: 1.6l

Chemicals

Heat Sink Compound, #860, Squeeze Tube MG Chemical

30389 MG



Will Not Dryout Harden or Separate

Flux Remover #4140 400am MG Chemical

30364 MG 400gm | \$13.34 ea

Removes all Rosin. Non-rosin, No-clean, Ionic & Non-ionic Flux & Residue



Silicone Conformal Coating, #422 MG Chemical 30366 MG 340gm | \$18.95 ea

> Protects Against Moisture, Dirt, Arcing & Shorts



Visit www.mpja.com for Complete Product Line

Isopropyl Alcohol 99.9%, #824, **Ouart Bottle** MG Chemical 30373 MG 1qt | \$12.95 ea



Thermal Grease II, High Thermal #8616, Syringe conductivity MG Chemical 30391 MG 8.2gm | \$5.95 ea

Will Not Dryout Harden or Separate

Electrosolve Contact Cleaner, #409B MG Chemical 30361 MG 140gm | \$7.75 30362 MG 340gm | \$13.34

Heavy Duty Flux Remover, #413B MG Chemical 30363 MG 425gm | \$17.95 ea



Isopropyl Alcohol Wipe, #824-W MG Chemical

30374 MG pkg. 25 | \$11.45

Cleaner with 99.9% pure Isopropyl Alcohol



Thermal Conductive Adhesive, 8329TCS, Slow Cure MG Chemical



Super Cold 134 #403A MG Chemical 30355 MG 185gm | \$10.19

400gm | \$13.87 100% Ozone Safe HFC134A gas (R-134)

30356 MG



Contact Cleaner with Silicone. #404B MG Chemical 30357 MG 140gm | \$7.85 30358 MG 340gm | \$12.39 ite

Alcohol Wipes, General purpose. #8241-T. MG Chemical 30375 MG | \$8.95 ea

General Purpose Cleaner with 70% pure Isopropyl Alcohol



Thermal Conductive Adhesive, #8329TCS, Slow Cure **MG Chemical**



Super Wash Cleaner/ Degreaser, #406B MG Chemical 30359 MG 425qm | \$15.26 ea

> Ozone Safe-No Residue Non-conductive Safe on plastics



Nu-Trol Control Cleaner, #401B MG Chemical 30350 MG 140gm | \$7.65 ea



Liquid Rosin Flux #835 Bottle MG Chemical

30382 MG 100ml | \$8.95 ea



Thermal Conductive Adhesive, #8329TCM, **Medium Cure** MG Chemical



Acrylic Conformal Coating, #419C MG Chemical

30365 MG 340gm | \$17.95 ea



Super Duster 134, #402A MG Chemical

30351 MG 285gm | \$9.51 30352 MG 450gm | \$14.79

100% Ozone Safe HFC134A gas (R-134)



Rubber Renue. #408A Bottle MG Chemical

30360 MG 125ml | \$7.95 ea

Cleaner-Softner for rubber belts & rollers



Extreme Electrical Conductivity Adhesive, #8330S Silver Filled MG Chemical



Super Shield, Nickel Coating, #841, MG Chemical 30384 MG

340gm | \$36.95 ea Conductive Nickel Shielding Paint Reduces EMI/RFI



Super Duster 152, #402B MG Chemical

30353 MG 285gm | \$7.45 30354 MG 400gm | \$9.95

Ozone Safe 99% 1,1-Difluoroethane



Solder Braid MG Chemical

30369 MG #424 | \$2.85/5ft 30370 MG 425 | \$2.95/5ft 30371 MG #426 | \$3.15/5ft 30372 MG #442 | \$10.95/25ft Oxygen Free Copper





Adhesive, Conductive

30380 MG 14gm | \$39.95 ea

#8331, Silver Filled

MG Chemical



Red GLPT Varnish. #4228 Bottle MG Chemical

30367 MG 225ml | \$24.97 ea



1/8" Heat Shrink Assortment, 6in. Long, Color

16831 HS | \$2.25 ea



Heat Shrink Assort-

Chemicals/Heatshrink



Conductive Grease, #846 Carbon Filled. MG Chemical

30386 MG 80gm | \$15.95 ea



Potting Compound, #832C Clear MG Chemical

30377 MG 375ml | \$29.61 ea

#832B Black

MG Chemical

30376 MG 375ml | \$30.57 ea



3/16" Heat Shrink Assortment, 6in. Long,

16832 HS | \$2.50 ea



Heat Shrink Assortment, 4" Long, Color 16843 HS



Conductive Ink Pen. #8420-P Silver Filled, MG Chemical

30385 MG 8.5gm | \$27.95 ea



1/4" Color Heat Shrink Potting Compound, Assortment, 6in. Long 16833 HS | \$2.75 ea



Heat Shrink Assortment, 2-1/2" Long, Black

16835 HS \$10.95 ea



White Lithium Grease, #8461 Squeese Tube, MG Chemical

30387 MG 85ml | \$7.15 ea



Potting Compound, #833FRB Flame Retardant - MG Chemical

30378 MG 375ml | \$43.95 ea 3/8" Color Heat Shrink Assortment, 6in. Long

16834 HS | \$2.95 ea



Natural Nylon Wire Ties

Pack of 100

20199 TY | 4in | \$1.10 20200 TY | 5-1/2in | \$1.70 24529 TY | 7-1/2in | \$2.80 24530 TY | 11in | \$5.00

Silicone Grease. #8462 Translucent Saueeze Tube MG Chemical

30388 MG 85ml | \$12.39 ea



Total Ground Conductive Carbon #838 Aerosol Can MG Chemical

30383 MG 340gm | \$18.95 ea



Black Heat Shrink Assortment 6in. Long 16830 HS | \$3.95 ea



Black Nylon Wire Ties

Pack of 100

11630 TY | 4in | \$1.30 11508 TY | 7-1/2in | \$2.50 11633 TY | 11in | \$6.90

Connector Coat Black, #4229 Bottle **MG Chemical** 30368 MG 55ml | \$14.95 ea

Adhesive, Conductive, #8331S, Silver Filled MG Chemical



Adhesive/Screw Mounts for Wire Ties



500pc. 4" Cable Ties in 5 Colors

34524 TY | \$4.95 ea



Power Supplies

9VDC @ 16.7Amp Meanwell Supply 18367 PS | \$14.95 ea



+5V, +3.3V, +24V & -12V Meanwell Supply 18366 PS | \$29.95 ea



320W Hengfu Supplies 31340 PS | 5V/60A | \$59.95 ea 31342 PS | 12V/25A | \$59.95 ea 31344 PS | 24V/13A | \$59.95 ea



Power Supply 34293 PS | \$8.95 ea

5V & 12V DC 5A



15V @ 3Amp Meanwell Supply 31506 PS | \$9.95 ea



24V @ 2.7Amp SL **Power Supply**



12VDC 750mA USED Unreg. Plug Supply Leader 33475 PD | \$2.95 ea



12VDC 2.5A Plug Power Supply Netgear 33380 PS | \$6.95 ea



5VDC 4A Plug Power Supply Openpeak 18520 PS | \$6.95 ea



5VDC 2A Plug USB Power Supply



9VDC 1A Power Supply Kenwood



15VDC 900mA Power Supply iConnect



9VDC 1A Adapter Power Supply Ault

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12VDC 2A Adapter Power Supply Sino



12VDC 2.5A Used Adapter Power Supply Leader 30201 PS | \$5.95 ea



12VDC 3A Adapter **Power Supply** 34445 PS | \$6.95 ea



24VDC 5A Adapter **Power Supply Megmeet**



48VDC 2.08A Adapter **Supply XP Power** 32492 PS | \$18.95 ea



Adjustable Boost DC/DC Converter

31397 PS | \$4.95 ea



Adjustable Boost DC/DC Converter with Meter 33525 PS | \$7.95 ea



Adjustable Buck DC/DC Converter 30148 PS | \$3.95 ea



Adjustable Buck DC/DC Converter with Meter 30149 PS | \$9.95 ea



Constant Voltage & Current DC/DC Converter 31562 PS | \$4.95 ea



Adiustable DC/DC Regulator 31800 PS | \$2.95 ea





Transformers

Chassis Mount Transformers



Selecting Transformers

Volts & Current listed are nominal RMS. Open circuit and loaded values are different. Type of rectifier/filter circuit will effect secondary & output current and they can be very different.

Full wave center tap choke input filter:

Transformer secondary amps are .7 X required output amps.

Full wave center tap cap input filter: Transformer secondary amps are 1.2 X required output amps.

For Full wave bridge choke input filter: Transformer secondary amps are = to required output amps

For Full wave bridge cap input filter: Transformer secondary amps are 1.8 X required output amps.

STOCK A	STYLE	IMPUT	OUTPUT VOLTS	AMP5	LEADS	DIMN (LWH)	WT	1EA
27838-TR	A	110/220VAC	12VAC (6V-0V-6V)	1A	6"	2-3/4" x 1-1/2" x 1-5/8"	.6	\$6.75
27839-TR	Α	110/220VAC	12VAC (6V-0V-6V)	2A	6"	3-1/4" x 2" x 2"	1.3	\$8.95
27840-TR	A	110/220VAC	12VAC (6V-0V-6V)	4A	6"	4" x 2" x 2-1/4"	- 1.7	\$15.95
27841-TR	Α	110/220VAC	18VAC (9V-0V-9V)	1A	6"	3" x 2" x 1-3/4"	.8	\$6.95
27842-TR	A	110/220VAC	18VAC (9V-0V-9V)	1.5A	6"	3-1/4" x 2" x 1-7/8"	1.1	\$8.95
27843-TR	Α	110/220VAC	18VAC (9V-0V-9V)	2A	6"	3-1/4" x 2" x 1-7/8"	1.1	\$8.95
27844-TR	Α	110/220VAC	24VAC (12V-0V-12V)	2A	6"	3-1/2" x 2-1/4" x 2"	1.4	\$11.95
27845-TR	Α	110/220VAC	24VAC (12V-0V-12V)	4A	6"	3-7/8" x 2-1/2" x 2-1/4"	2.3	\$18.95
27846-TR	В	110/220VAC	24VAC (12V-0V-12V)	10A	6"	3-3/4" x 3-5/8" x 3-3/8"	5.5	\$39.95

The Transformers above have a Center tapped secondary allowing use of Half wave, Full wave center tap or Full wave bridge rectifier circuits.

500VA 0-130VAC Variable Power

15162 TR \$59.95 ea



2KVA 0-130VAC Variable Power **Transformer**

15163 TR \$114.95 ea

Control Transformer 120/220/240/480V 50VA 31833 TR | \$39.95 ea



Control Transformer 26.5V 40VA

32196 TR | \$7.95 ea



LED Driver 3W Output 85-265VAC Input

31536 PS | \$1.95 ea



LED Driver 10W Output 90-264VAC Input

32817 PS | \$3.95 ea



LED Driver 20W Output 110-260VAC Input

31538 PS | \$5.95 ea



LED Driver 30W Output 110-260VAC Input

31539 PS | \$8.95 ea



LED Driver 3W Output 12VDC Input

31556 PS | \$1.95 ea

LED Driver 10W Output 12-24VAC/DC Input 31557 PS | \$3.95 ea



LED Driver 20W Output 12-24VDC Input 31558 PS | \$8.95 ea



LED Driver 30W Output 12-24VDC Input

31559 PS | \$8.95 ea



Sealed Lead Acid Recargable Battries

17280 BT | 6V 4Amp | \$7.95 ea 14817 BT | 6V 8Amp | \$19.95 ea 14819 BT | 12V 7Amp| \$22.95 ea



Thermoelectric Cooling Module 63 couple 12VDC 34134 PM | \$4.95 ea



Thermoelectric Cooling Module 127 couple 12VDC 30207 PM | \$4.98 ea



Peltier Cooling Assembly, 12VDCut 15312 PM | \$29.95 ea









LEDs/Indicators

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12Vdc 5 Meter Roll LEDs

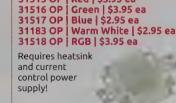
19434 OP | Cool White | \$12.95 ea 33111 OP | Med. White | \$12.95 ea 31362 OP | Red | \$12.95 ea 19441 OP | Blue | \$12.95 ea





Bulk Pack LEDs 100 per pack

15101 OP | 3mm Red | \$1.95 ea 3mm Green | \$1.95 ea 3mm Yellow | \$1.95 ea 15102 OP 15103 OP 3mm Blue | \$2.95 ea 5mm Red | \$1.95 ea 15104 OP 15108 OP 15307 OP | 5mm White | \$2.95 ea 15308 OP | 5mm Green | \$1.95 ea 15309 OP | 5mm Yellow | \$1.95 ea 31363 OP | 5mm Blue | \$3.95 ea



10 Watt LEDs

31515 OP | Red | \$3.95 ea

3VDC Mini LASER Head 635nm <5mw

19566 LZ | \$2.25 ea



5 Meter Roll RGB LED, Controller and Supply

31541 OP | \$19.95 ea

PVC encapsulated roll, controller not waterproof Includes IR



High Lumen Cool White LEDs

31325 OP | 10 Watt | \$2.95 ea 31326 OP | 20 Watt | \$7.95 ea 31327 OP | 30 Watt | \$9.95 ea

heatsink and current control power supply!



5VDC LASER Diode Red Crosshair Pattern <5mw 33029 LZ | \$2.95 ea



12VDC 5 Meter Cool White LED Roll

31192 OP | \$9.95 ea



Assortment Pack LEDs 100 per pack

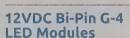
32674 OP | 3mm | \$2.95 ea 32066 OP | 5mm | \$2.95 ea



10 Watt Infrared LEDs

32621 OP | 730nM | \$22.95 ea 32622 OP | 850nM | \$10.95 ea 32623 OP | 940nM | \$9.95 ea

Requires heatsink and current control power supply!



33410 OP | Warm White | \$1.95 ea 33411 OP | Cool White | \$1.95 ea



12VDC 72 Lumen Cool White 20 Module String 19438 OP | \$14.95 ea



Flashing RGB 5mm LEDs Pack of 100

32889 OP | \$4.95 ea



10 Watt Ultraviolet LEDs

32614 OP | 365-367nM | \$49.95 ea 32616 OP | 385-390nM | \$14.95 ea 32617 OP | 395-400nM | \$14.95 ea 32618 OP | 410-415nM | \$10.95 ea 32619 OP | 420-430nM | \$9.95 ea

Requires heatsink and current control power supply!

12V AC/DC 3Watt Cool White MR-16 LED

31975 OP | \$3.95 ea



12VDC 36 Lumen Cool White 20 Module String

31366 OP | \$12.95 ea



12VDC Cool White

Piranah LED Boards

32035 OP | 3 x 8 LEDs | \$4.95 ea

33081 OP | 3 x 16 LEDs | \$9.95 ea 33070 OP | 6 x 8 LEDs | \$9.95 ea

10 Segment LED Bargraph

32253 OP | Red | \$1.75ea 32325 OP | Blue | \$1.75ea 32326 OP | Green | \$1.75ea 32327 OP | Yellow | \$1.75ea



10mm Super Bright Cool White LED 15000mcd

15415 OP | \$0.15 ea Current limiting resistor required



12VDC 5mm LED Lamps

30124 LA | Red | \$0.75ea 30125 LA | Green | \$0.75ea 30126 LA | Yellow | \$0.75ea 30127 LA | Blue | \$0.75ea 30128 LA | White | \$0.75ea



50 Micro LEDs in a 5 Meter String

31985 OP | Cool White | \$5.95ea 31984 OP | RGB Flashing | \$9.95ea



12V AC/DC LED Indicators

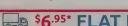
32750 LA | Red | \$2.49 ea 32751 LA | Green | \$2.49 ea 32752 LA | Blue | \$2.49 ea



12V AC/DC 22mm LED **Indicators**

31087 LE | Red | \$2.95 ea 31088 LE | Green | \$2.95 ea 31089 LE | Yellow | \$2.95 ea





Solid State Relay

31931 RL | 10 Amp | \$5.95 ea 31932 RL | 25 Amp | \$8.95 ea 31933 RL | 40 Amp | \$10.95 ea

DC-AC 3-32VDC control voltage. 24-480VAC output voltage SPST-NO AC only



12 Position Euro Block

32940 TS | 10Amp | \$1.75 ea 32941 TS | 20Amp | \$1.85 ea 32675 TS | 30Amp | \$1.95 ea



Threaded locking connector pair

32420 PL | 2 Pin | \$1.95 ea 32421 PL | 3 Pin | \$1.95 ea 32423 PL | 5 Pin | \$1.95 ea 32426 PL | 8 Pin | \$1.95 ea

Snap locking

connector pair

32567 PL | 2 Pin | \$2.89 ea 32568 PL | 3 Pin | \$2.89 ea 32569 PL | 4 Pin | \$2.89 ea

32570 PL | 5 Pin | \$2.89 ea





Miscellaneous

Ul Hook-Up Wire

Handy spool of 100ft. General Purpose 300 Volt, 105Deg. "C", UL 1007/1569 Copper conductor Hook-up wire.

SOLID 22AWG		WT:
STOCK #	DESC.	
32270-WI	Solid Red	\$8.95
32271-WI	Solid Black	\$8.95
32272-WI	Solid Yellow	\$8.95
32273-WI	Solid Blue	\$8.95
32274-WI	Solid White	\$8.95
32275-WI	Solid Green	\$8.95
CTDANID	ED 224146	

O	20110 0100	40123
32274-WI	Solid White	\$8.95
32275-WI	Solid Green	\$8.95
	ED 22AWG	WT:
STOCK #	DESC	1Ea
32280-WI	Stranded Red	\$8.95
32281-WI	Stranded Black	\$8.95
32282-WI	Stranded Yellow	\$8.95
32283-WI	Stranded Blue	\$8.95
32284-WI	Stranded White	\$8.95
32285-WI	Stranded Green	\$8.95

32204-441	Stranged willte	20.73
32285-WI	Stranded Green	\$8.95
STRAND	ED 18AWG	WT: .
STOCK #	DESC	188
32290-WI	Stranded Red	\$12.9
32291-WI	Stranded Black	\$12.9
32292-WI	Stranded Yellow	\$12.9
32293-WI	Stranded Blue	\$12.9
32294-WI	Stranded White	\$12.9

32295-WI Stranded Green \$12.95

Solid State Relay

33980 RL | 10 Amp | \$6.95 ea 33981 RL | 25 Amp | \$9.95 ea 33932 RL | 40 Amp | \$11.95 ea

DC-DC 3-32VDC control voltage. 5-60VDC output voltage SPST-NO DC only



Heat Sink for Solid State Relay

32434 HK | \$4.95 ea



Heat Sink for Solid

State Relay

32052 HK | \$3.95 ea

200Amp Binding Posts Red & Black Pair

32937 PL | \$4.95 ea



Solid State Relay

33984 RL | 10 Amp | \$6.95 ea 33985 RL | 25 Amp | \$8.95 ea 33986 RL | 40 Amp | \$11.95 ea

PC Mount Terminal Strip

18318 TS | 2 Position | \$0.39 ea 18319 TS | 3 Position | \$0.49 ea

5mm spacing end stackable

AC-AC 80-280VAC control voltage. 24-480VAC output voltage SPST-NO AC only



DPDT DIP Relay 32555 RL | 3VDC | \$1.29 ea 32556 RL | 5VDC | \$1.29 ea 32558 RL | 9VDC | \$1.29 ea 32559 RL | 12VDC | \$1.29 ea 32560 RL | 24VDC | \$1.29 ea

HK19F Series DC relays contacts rated 1A/125VAC or 2A/30VDC



Adjustable 3 Axis Stage 33383 MI | \$169.95 ea



Solid 22Awg Hook Up Wire Set

32267 WI | \$15.95 ea 6 colors 25' each spool



5.5mm Power Jacks

32104 PL | 5.5/2.1mm | \$1.49 ea 32105 PL | 5.5/2.5mm | \$1.49 ea Metal Chassis mount connector with solder tabs



5-7/8" x 2-3/4" x 1-7/16" Aluminum Heat Sink 32088 HK | \$12.95 ea



2 Axis X/Y Stage 33402 MI | \$139.95 ea



Stranded 22Awg Hook **Up Wire Set**

32269 WI | \$15.95 ea 6 colors 25' each spool



5.5mm Power Adaptors

19452 PL | 2.1mm Plug | \$0.89 ea 19453 PL | 2.5mm Plug | \$0.89 ea 19454 PL | 2.1mm Jack | \$0.89 ea 19455 PL | 2.5mm Jack | \$0.89 ea Adapts wire leads to coaxial/barrel power connectors Screw terminals to



10" x 7" x 2" Aluminum Heat Sink 33305 HK | \$23.95 ea



15-3/4" X 7-13/16" X 2" Aluminum Heat Sink 33306 HK | \$59.95 ea



Wire Wrap Wire 30AWG

33125 WI | Red | \$7.95 ea 33126 WI | Black | \$7.95 ea 33129 WI | Green | \$7.95 ea

Approximately 650ft.



THERMOCOOL AC FANS **UL/TUV/CE RoHS Compliant**

















Α	В	C	D	E	F	G		н		- 1	
STOCKA	FIG	P/H	DIASH	VOLTS/AMP	CFM	NEISE	BEARING	CONNECT	WT	TEA	12+EA
17771-FN	Α	G8025HAS	3-1/8" SQ X 1"	125AC/.13	23	30	SLV.	WIRE	.6	\$9.95	\$8.95
17772-FN	В	G8038HAS	3-1/8" SQ X 1-1/2"	125AC/.14	28	33	SLV.	WIRE	6	\$14.95	\$12.95
17773-FN	C	G9225HAS	3-5/8" SQ X 1"	125AC/.14	34	40	SLV.	TERM	.5	\$9.95	\$8.95
17774-FN	D	G12025HAS	4-11/16" SQ X 1"	125AC/.20	66	42	SLV.	TERM	.75	\$9.95	\$8.95
17775-FN	E	G12038HAS	4-11/16" SQ X 1-1/2"	125AC/.28	95	48	SLV.	TERM	1.1	\$12.95	\$10.95
17776-FN	E	G12038MAB	4-11/16" SQ X 1-1/2"	125AC/.22	85	44	BALL	TERM	1	\$15.95	\$12.95
17777-FN	E	G12038MAS	4-11/16" SQ X 1-1/2"	125AC/.22	85	44	SLV.	TERM	1.1	\$11.95	\$9.95
17778-FN	F	G13538HAS	5-5/16" SQ X 1-1/2"	125AC/.34	122	53	SLV	WIRE	1.2	\$14.95	\$12.95
17779-FN	G	G15050HAS	6" SQ X 2"	125AC/.40	198	58	SLV	WIRE	1.9	\$22.95	\$19.95
17780-FN	Н	G17050HASB	6-3/4" RND X 2"	125AC/.40	198	59	BALL	TERM	1.8	\$22.95	\$19.95
17781-FN	1	G17050HAST	6-3/4" X 6 X 2"	125AC/.40	198	59	BALL	TERM	1.9	\$22.95	\$19.95

FAN GUARDS

PICTURES ARE REPRESENTIVE OF THE STYLE AND MAY NOT BE EXACT.













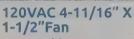
		A	В	D	E	F	G		
STOCK#	FIG.	FAN SIZE	STYLE	MOUNTING	MAT.	FINISH	WT.	1EA	10+EA
18383-FN	Α	1-9/16"/40MM	OFFSET	4 CORNERS	STEEL	CHROME	.01	\$0.99	\$0.89
18384-FN	В	2-3/8"/60MM .	OFFSET	4 CORNERS	STEEL	CHROME	.03	\$0.99	\$0.89
18386-FN	. D	3-1/8"/80MM	OFFSET	4 CORNERS	STEEL	CHROME	.04	\$1.25	\$0.99
18387-FN	E	3-5/8"/90MM	OFFSET	4 CORNERS	STEEL	CHROME	.05	\$1.25	\$0.99
18388-FN	F	4-11/16"/120MM	OFFSET	4 CORNERS	STEEL	CHROME	.08	\$1.39	\$1.25
17815-FN	G	5" /127MM	OFFSET	4 CORNERS	STEEL	CHROME	.13	\$0.49	\$0.49

120VAC 6-3/4" Fan

31876 FN | \$22.95 ea 172mm X 50mm X 150mm







33012 FN | \$8.95 ea 120mm X 38mm



120VAC 3-1/2" x 1-1/2"Fan

33010 FN | \$7.95 ea 80mm X 38mm



230VAC 3-1/2" X 1-1/2" Fan

33489 FN | \$5.95 ea 80mm X 38mm



Plastic Guard & Filter

33403 FN | 80mm | \$1.79 ea 33404 FN | 120mm | \$1.95 ea



Louvered Fan Guard with Dust Filter for 4-11/16" (120mm) Fan

33406 FN \$3.95 ea



Cabinet Vent with Dust Filter and Bracket

33405 FN \$9.95 ea



4 plugs 27" Fan Cord 30347 FN | \$1.95 ea

5VDC 2-3/8" X 1"Fan

33704 FN | \$2.95 ea 60mm X 25mm



5VDC 1-9/16" X 3/8"Fan/Blower 34467 FN | \$3.95 ea



~4.6cfm

Detachable flow director

5VDC 1-9/16" X 3/8"Fan 31854 FN | \$2.95 ea 40mm X 10mm



5VDC 1-9/16" X 1/2" Fan

31414 FN | \$1.95 ea 40mm X 13mm





12VDC 2"X 3/8" T&T Fan 50mm X 10mm 12773 FN | \$1.65 ea

9 CFM



12VDC 1-1/2" X 1-1/8" Delta Fan 38mm x 28mm 33157 FN | \$4.95 ea ~17CFM



12VDC 2-3/8" X 3/4" Delta Fan 60mm x 20mm 32786 FN | \$2.95 ea

~13 CFM



12VDC, 2-3/8" X 1" Jamicon Fan 60mm X 25mm 17526 FN | \$2.95 ea

Fans

~17CFM



12VDC 2-3/8" X 1" Boxer Fan 60mm X 25mm 33482 FN | \$2.95 ea



12VDC 2-3/4" X 3/4" AVC Fan 70mm X 20mm

32788 FN | \$2.95 ea



12VDC, 3-1/8" X 1" NMB Fan 80mm X 25mm 34412 FN | \$4.95 ea

42CFM Max

Speed Varies with Temp.



12VDC 3-1/8" X 1" NMB Fan 80mm X 25mm 32685 FN | \$5.95 ea



12VDC, 3-1/8" X 1" NMB Fan 80mm X 25mm 34550 FN | \$2.95 ea

25CFM



12VDC 3-1/8" 179FM NMB Fan 80mm X 25mm 33480 FN | \$2.49 ea

35CFM



12VDC 3-5/8" X 1" NMB Fan 90mm X 25mm 34001 FN | \$2.95 ea

35CFM



12VDC 3-5/8" X 11/16" Fan 92mm X 25mm

19387 FN | \$5.95 ea



12VDC 3-5/8" X 1" NMB Fan 90mm X 25mm 33484 FN | \$2.95 ea

31CFM



12VDC 4-11/16" X 1-1/2" Fan 120mm X 38mm 33923 FN | \$8.95 ea

85CFM



12VDC 4-11/16" X 1" Sunon Fan 120mm X 25mm 32610 FN | \$4.95 ea

90CFM



12VDC 4-11/16" X 1" Sunon Fan 120mm X 25mm 31203 FN | \$4.95 ea



12VDC Fan & Heatsink **17045 HK | \$4.95 ea** 60mm X 80mm X 64mm

~14CFM Fan



12VDC Fan & Heatsink

33477 HK | \$19.95 ea 50mm X 50mm X 30mm



12VDC Fan & Heatsink 18710 HK | \$4.95 ea Fan 80mm X 80mm X 25mm



24VDC 1-9/16" X 3/4" Sunon Fan 40mm x 20mm 33785 FN | \$3.95 ea

~7.7 CFM



24VDC 2-3/8" X 13/16" Fan Globe 60mm x 20mm

33483 FN | \$1.95 ea

~13 CFM



24VDC 4-11/16" X 1" Fan 125mm X 25mm 32921 FN | \$5.95 ea



24VDC 4-11/16" X 1-1/2" NMB Fan 120mm X 38mm 34410 FN | \$8.95 ea

83CFM



24VDC 6-3/4" X 2" Fan 172mm x 51mm 19297 FN | \$19.95 ea

蹬235CFM







Proto/Breadboards

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Solderless Breadboards









65 Piece Breadboard **Jumper Pin Set**

30116 PL | \$3.95 ea

Male to Male



White ABS plastic body (except G clear), B, C & E come with metal mounting base. Nickel plated phosphor bronze contacts. Contact resistance less than 1 milliohm @ 1kHz. Tested for over 10,000 cycles. Snap lock molded dovetail for combining multiple boards, Suitable for 19-29 AWG wire & all DIP size components. Please visit our web site for more detailed information. M = Male F = Female

STOCK #	IIIG.	DESC	SIZELXW	WT.	1EA	10+EA
24443-TE	A.	830 point	6-1/2" X 2-1/8"	.3	\$4.95	\$3.95
24444-TE	В	830 point 3 Binding Post and Jumper Kit	7-7/8" X 4-1/8"	.8	\$9.95	\$8.95
24445-TE	C	1660 point 3 Binding Post and Jumper Kit	8-3/8" X 5-1/8"	.9	\$12.95	\$12.45
24447-TE	E	3220 point 4 Binding Post and Jumper Kit	10-3/8" X 9-1/8"	2	\$22.95	\$21.95
27027-TE	F	140 Piece 22 AWG Jumper Wire Kit		.3	\$3.95	\$3.49
18103-TE	G	830 point Clear ABS Body	6-1/2" X 2-1/8"	.3	\$4.95	\$3.95

40pc Header Jumper

30117 PL | F to F | \$3.95 ea 31217 PL | M to M | \$3.95 ea 31218 PL | M to F | \$2.72 ea

Proto Board Set of 4

FR-4 boards with 0.1" spacing. One

each of thr following: 30123 PB, 31091

32065 PB | \$2.95 set

PB, 31169 PB and 31253 PB.



Powered Breadboard



Powered Breadboard

30176 TE | \$10.95 ea

8 Pin SOP Adapter **Board Double Sided**

31456 PB | \$0.59 ea





10 Pin SOP Adapter **Board Double Sided**

31457 PB | \$0.59 ea



14 Pin SOP Adapter

Board Double Sided

31864 PB | \$0.69 ea



Proto Boards

32891 PB | 170 holes | \$1.00 ea 32892 PB | 276 holes | \$1.95 ea 32893 PB | 830 holes | \$4.95 ea Based on the breadboard pattern

20 pin IC Proto Board

32540 PB | \$1.00 ea

.1" pad spacing

Single Sided .062" FR-4 board,



24 Pin SOP Adapter **Board Double Sided**

31461 PB | \$0.99 ea

Doudle sided, .1" pad spacing, Plated thru copper pads. Sold Individually

FR-4 Proto Boards

30123 PB | 2cm X 8cm | \$0.99 ea 31091 PB | 4cm X 6cm | \$1.29 ea 31253 PB | 3cm X 7cm | \$1.19 ea 31169 PB | 5cm X 7cm | \$1.79 ea 32011 PB | 8cm X 12cm | \$4.95 ea 32012 PB | 9cm X 15cm | \$5.95 ea 32013 PB | 15cm X 20cm | \$9.95 ea 32014 PB | 20cm X 30cm | \$19.95 ea



Proto Board Special

33353 MI | \$6.95 ea 5 pieces of 170 tie point breadboard and 5 pieces of 170 tie point proto board for one low price.



16 Pin SOP Adapter **Board Double Sided**

31459 PB | \$0.69 ea



20 Pin SOP Adapter

Board Double Sided



28 Pin SOP Adapter **Board Double Sided**

31462 PB | \$0.89 ea





Phenolic Proto Boards

Single sided, .1" pad spacing, unplated copper pads. Sold Individually

15918 PB | 44mm X 39mm | \$0.59 ea 16227 PB | 60mm X 50mm | \$0.79 ea 15914 PB | 82mm X 64mm | \$1.10 ea 15912 PB | 110mm X 80mm | \$1.75 ea



230 Tie Point Mini Solderless Breadboard. Unmounted

18862 TE | \$2.95 ea







1.8 Deg STEP MOTORS



NEMA 23: Mounting Face 2-3/16in. Sq. NEMA 34: Mounting Face 3-3/8in. Sq.

Note: * Indicated Step Motor has a DUAL SHAFT. Additional Information Avaliable On our website

STOCK W	FIG-	HIMA	VDC	A	W	HLD: TORQ.	P/ N	TYPE	LENGTH (sopre)	SHAFT	WT.	150
18735-MS	A	17	5.2V	.5	10.5	1.5Kg/cm	42BHH34-050A-18	6 lead	1-3/8"	5 X 17mm	.5	\$9.95
18733-MS	Α	17	12V	.31	38	1.6Kg/cm	42BHH34-031A-18G	6 lead	1-3/8"	5 X 17mm/flat	.5	\$9.95
17453-MS	Α	17	5.2V	1	5.2	3.2Kg/cm	42BHH48-100E-24	6 lead	2"	5 X 22mm	.84	\$15.95
18734-MS	A	17	12V	.4	30	3.2Kg/cm	42BHH48W-040B-24	6 lead	1-7/8"	5 X 22mm	.76	\$10.95
18686-MS	В	23	2.8V	2	1.4	4.2Kg/cm	57BHH41-200B-21	6 lead	1-5/8"	6.35 X19mm	1	\$17.95
17454-MS	В	23	24V	.34	71	4.4Kg/cm	57BHH41-034A-21	6 lead	1-5/8"	. 6.35 X19mm	1	\$17.95
17455-MS	C	23	6.2V	1	6.2	9Kg/cm	57BHH56-10D-21N	6 lead	2-3/8"	6.35 X19mm	1.6	\$14.95
18728-MS	C*	23	6.2V	-1	6.2	9Kg/cm	57BHH56-10D-21DH	6 lead ·	2-3/8"	6.35 X20mm/Dual	1.6	\$15.95
18189-MS	D	23	5.7V	2.3	2.5	16Kg/cm	57BHH76-200B-25C	6 lead	3" "	6.35 X25mm	2.3	\$23.95
18729-MS	D*	23	5.7V	2.3	2.5	16Kg/cm	57BHH76-200B-26DA	6 lead	3"	6.35 X24mm/Dual	2.4	\$23.95
18687-MS	D	23	4.5V	2.5	1.8	18Kg/cm	57BHH76-250E-21G	6 lead	3"	6.35 X25mm	3.4	\$24.95
17456-MS	E	23	3.6V	3	1.2	21Kg/cm	57BHH82-300E-21U	6 lead	3-1/4" .	6.35 X19mm	2.6	\$34.95
17458-MS	F	34	3.0V	3	-1	23Kg/cm	86BHH76-400C-35	6 lead	3"	13 X35mm	4.7	\$54.95
18190-MS	G	34	6.0VDC	2	3	48Kg/cm	86BHH114-200C-37BS	8 lead	4-17/32"	13 X35mm	8.1	\$68.00
17457-MS	Н	34	7.8VDC	2	3.9	63Kg/cm	86BHH150-200A-37BS	8 lead	6"	13 X35mm	11	\$79,95

3A Step Motor Driver 31306 MS | \$14.95 ea



3.5A Step Motor Driver

4A Step Motor Driver

32381 MS | \$17.95 ea

32383 MS | \$19.95 ea

1.5A Step Motor Driver 18187 MS | \$54.90 ea



AC Powered Step Motor Driver 18727 MS | \$169.95 ea



6A Step Motor Driver 18188 MS | \$96.00 ea



Linear Drive Belt Kit



Flexible Helical Cut Couplers

Aluminum **Dual Set** Screws



33600 HD | 3mm to 4mm | \$3.95 ea 33601 HD | 3mm to 6mm | \$3.95 ea 33602 HD | 3mm to 1/4" | \$3.95 eav 33603 HD | 4mm to 5mm | \$3.95 ea 33604 HD | 4mm to 6mm | \$3.95 ea 33605 HD | 4mm to 1/4" | \$3.95 ea 33606 HD | 4mm to 8mm | \$3.95 ea 33607 HD | 4mm to 10mm | \$3.95 ea 33608 HD | 5mm to 6mm | \$3.95 ea 33609 HD | 5mm to 1/4" | \$3.95 ea 33610 HD | 5mm to 8mm | \$3.95 ea 33611 HD | 6mm to 6mm | \$3.95 ea 33612 HD | 6mm to 1/4" | \$3.95 ea 33613 HD | 6mm to 8mm | \$3.95 ea 33614 HD | 6mm to 10mm | \$3.95 ea 33615 HD | 1/4" to1/4" | \$3.95 ea 33617 HD | 1/4" to 8mm | \$3.95 ea 33619 HD | 7mm to 7mm | \$3.95 ea 33620 HD | 7mm to 8mm | \$3.95 ea 33621 HD | 8mm to 8mm | \$3.95 ea 33622 HD | 8mm to 10mm | \$3.95 ea

Step Motor Bracket

32431 MS | Nema 17 | \$4.95 ea 32379 MS | Nema 23 | \$4.95 ea 32432 MS | Nema 34 | \$8.95 ea

33623 HD | 10mm to 10mm | \$3.95 ea



Rigid Shaft Coupler

33557 HD | 5mm to 5mm | \$2.95 ea 33560 HD | 5mm to 8mm | \$2.95 ea



300mm Leadscrew Step Motor

33515 MS | \$29.95 ea

T8x2-4 Start



NEMA 17 Step Motor 100mm Leadscrew

31564 MS | \$29.95 ea



350mm Leadscrew Kit 32396 HD | \$19.95 ea

T8x2-1 Start



Step Motors

Visit www.mpja.com for Complete Product Line

2.7V 1.8 Deg NEMA 23 Step Motor

30460 MS | \$7.95 ea 4 Wire Leads

2.3V 1.8 Deg NEMA 23 Step Motor



9V 1.8 Deg NEMA 23 Step Motor



3V 1.8 Deg NEMA 23 Step Motor

18854 MS | \$14.95 ea



2.5V 1.8 Deg NEMA 23 Step Motor

31394 MS | \$8.95 ea



12V Gearhead Step Motor



USED 24V 1.8 Deg NEMA 23 Step Motor

15837 MS | \$8.95 ea



3.84V 1.8 Deg NEMA 23 Step Motor



10.4V 1.8 Deg NEMA 17 Step Motor

33449 MS | \$10.95 ea

4 Wire Leads with Mtg. Bracket and 8mm Coupler



10.4V 1.8 Deg NEMA 17 Step Motor

33448 MS | \$10.95 ea

4 Wire Leads with Mtg. Bracket and 1/4" Coupler

10.4V 1.8 Deg NEMA 17 Step Motor

33358 MS | \$12.95 ea Includes COG Belt and Gear



10.4V 1.8 Deg NEMA 17 Step Motor



3.5V 3.75 Deg NEMA 17 Step Motor

32101 MS | \$5.95 ea

4 Wire Leads

5V Leadscrew Micro Step Motor

32378 MS | \$1.95 ea 4 P.C. Mount Leads



12V 1.8 Deg NEMA 14 **Step Motor**

18688 MS | \$13.75 ea

6 Wire Leads



12V 1.8 Deg NEMA 14 **Step Motor**

18689 MS | \$13.75 ea

0.72 Deg Penta Drive **NEMA 11 Step Motor**



56V Gearhead Step Motor

18891 MS | \$14.95 ea



2.66V .1 Deg NEMA 11 Step Motor

31129 MS | \$9.95 ea 6 Wire Leads



1.8 Deg NEMA 17 Step Motor

19533 MS | \$9.95 ea

4 Wire Leads

24V 3.6 Deg NEMA 17 Step Motor

18885 MS | \$1.95 ea



12V 3.75 Deg Step Motor 31393 MS | \$1.95 ea



Linear Actuator 34750 MS | \$19.95 ea



24V 7.5 Deg Step Motor

18368 MS | \$1.95 ea 5 Wire Leads







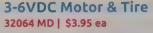
12VDC Gear Motors

37 mm dia X 51mm long motor plus 6mm dia, X 14mm shaft, bronze bearings. Six M3x0.5 mounting holes in front. Solder terminals

32203 MD | 5 RPM | \$12.95 ea 32204 MD | 30 RPM | \$12.95 ea 32205 MD | 50 RPM | \$12.95 ea 32206 MD | 100RPM | \$12.95 ea

37mm Motor Bracket 33574 MD | \$3.95 ea







12VDC ACME Gear Motor 32575 MD | \$19.95 ea





24VDC Gear Head Motor

36VDC Gear Head

Motor 31474 MD | \$12.95 ea

32684 MD | \$19.95 ea



12-80VDC 20Amp Max Motor Speed Control 33377 MD | \$15.95 ea

Motors/Controllers

6-24VDC 20Amp Max

Motor Speed Control

31566 MD \$8.95 ea



12VDC Gear Motor

17 mm dia X 45mm long motor plus 3mm dia. X 8mm shaft, bronze bearings. Two M2x0.4 mounting holes in front. Solder terminals

32208 MD | 25 RPM | \$12.95 ea 32209 MD | 55 RPM| \$12.95 ea

4.5VDC 140RPM Gearmotor

19285 MD | \$9.95 ea



SG90 Servo Motor 31002 MD | \$5.95 ea

3VDC Mini Motor

34668 MD | \$0.79 ea



USED 24VDC 45 RPM

Wheel

\$9.95 ea

17971 MD

Gear Head Motor with

Hi-Torque Servo Motor 34108 MD | \$69.95 ea



Motor Speed Control with Reversing Switch





6VDC Gear Head Motor

32176 MD | \$34.95 ea



~66RPM @ 6V

3VDC 37RPM Micro Gearmotor 31251 MD | \$7.25 ea



8-16VDC Mini Motor 18298 MD | \$0.99 ea



Speed Control/LED Dimmer Module

12-24VDC 30A 33920 MI \$14.95 ea



6.5-20VDC 10Amp Max Motor Speed Control



3VDC Flat Vibrator MOTOF 32115 MD | \$1.95 ea





Motor Speed Control

6-28VDC 2Amp Max **Motor Speed Control** with Memory



Die Cast Aluminum Boxes

Aluminum alloy with cover & M3.5 stainless steel screws included. Internal guides on ends & sides for holding PC boards, Natural Bare Aluminum Finish. Listed below are the outside dimensions.



STOCK #	L"	W"	H"	WT.	1EA
16281 BX	2.36"	2.17"	1.18"	.18	\$3.95
16282 BX	3.15"	2.17"	0.98"	.2	\$4.25
16283 BX	3.50"	1.37"	1.18"	.16	\$3.95
16284 BX	4.49"	2.52"	1.18"	.28	\$5.95
16285 BX	4.49"	2.52"	2.17"	.36	\$7.49
16286 BX	4.49"	3.50"	2.17"	.50	\$9.25
16287 BX	4.72"	3.94"	1.38"	.56	\$8.95
16288 BX	5.51"	3.94"	2.95"	.86	\$13.85
16289 BX	6.50"	5.00"	2.95"	1.12	\$18.55
16290 BX	6.73"	4.76"	2.17"	.96	\$17.51
16291 BX	6.73"	4.76"	4.17"	1.40	\$19.95
16292 BX	8.74"	5.75"	2.17"	1.44	\$22.91
16293 BX	8.74"	5.75"	4.17"	2.80	\$28.71
16294 BX	9.84"	9.84"	3.94"	3.50	\$51.88
16295 BX	10.83"	6.89"	2.56"	2.08	\$32.91
				A00000	

Sealed Plastic Boxes

Gray ABS plastic project boxes with lids. Tongue & grove sealing meet IP-65 & NEMA 4 requirements. 4 standoffs on base for holding PC boards. Includes stainless cover screws & neoprene gasket material. 17407 NO Internal Guides

Listed below are the outside dimensions.

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			(Account		
L"	W"	H"	WT.	1EA	
4.53"	3.54"	2.17"	.35	\$6.95	
6.73"	4.76"	2.17"	.54	\$9.95	
6.73"	4.76"	3.15"	.73	\$12.95	
7.68"	3.15"	2.17"	.49	\$8.95	
10.43"	7.28"	3.74"	1.5	\$24.95	
7.87"	4.72"	2.95"	.8	\$14.95	
9.45"	6.3"	4.72"	1.5	\$20.95	
11.81"	9.06"	4.37"	2.4	\$35.95	
14.17"	7.87"	5.91"	3.1	\$33.95	
	4.53" 6.73" 6.73" 7.68" - 10.43" 7.87" 9.45" 11.81"	4.53" 3.54" 6.73" 4.76" 6.73" 4.76" 7.68" 3.15" 10.43" 7.28" 7.87" 4.72" 9.45" 6.3" 11.81" 9.06"	4.53" 3.54" 2.17" 6.73" 4.76" 2.17" 6.73" 4.76" 3.15" 7.68" 3.15" 2.17" 10.43" 7.28" 3.74" 7.87" 4.72" 2.95" 9.45" 6.3" 4.72" 11.81" 9.06" 4.37"	4.53" 3.54" 2.17" .35 6.73" 4.76" 2.17" .54 6.73" 4.76" 3.15" .73 7.68" 3.15" 2.17" .49 10.43" 7.28" 3.74" 1.5 7.87" 4.72" 2.95" .8 9.45" 6.3" 4.72" 1.5 11.81" 9.06" 4.37" 2.4	

19" Plastic Rack Mount Cabinets

Black plastic rack mount clamshell cases. Vented sides with removable front & rear panels. Internal standoffs on top & bottom. Assembly required. NOTE: Not Available For Air Shipments. Measurements below are for Internal Space



STOCK #	DESC	W"	D"	H"	WT.	1EA
17086 BX	10	16-3/16"	7-11/16"	1"	1.9	\$24.95
17087 BX	2U	16-3/16"	7-11/16"	2-7/8" -	2.5	\$34.95
17088 BX	3U	16-3/16"	7-11/16"	4-1/2"	3.0	\$39.95

19" Metal Rack Mount Cabinets

19in. rack mount cases. 1/8in. Aluminum Front Panel with steel chassis & covers. Satin black textured paint. NOTE: Not Available For Air Shipments

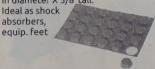


STOCK #	DESC	W"	D"	H"	WT.	1EA
17811 BX	10	19"	11.8"	1.75"	1.9	\$34.95
17812 BX	2U	19"	11.9"	3.5"	2.5	\$39.95

Rubber Feet

31471 BU | \$3.50 ea

3M P/N SJ6316 peel-n-stick rubber feet. Sheet of 24 Gray bumpers 7/8" in diameter X 3/8"tall. Ideal as shock



Desktop Instrument Case 33008 BX | \$89.00 ea



Plastic Project Cabinets

Black plastic project boxes with flat lids, Internal guides on ends & sides for holding PC boards. Includes cover screws. Note: 15881-BX has NO Internal Guides.

Outside dimensions are listed below.



STOCK #	L" or	W"	H"	WT.	1EA
15522 BX	3"	2"	1.16"	.07	\$2.49
15523 BX	4"	3"	1.6"	.13	\$2.95
15881 BX	4.41"	2.24"	.87"	.08	\$2.35
15518 BX	5"	2.5"	1.75"	.17	\$3.49
32652 BX	5.9"	3.9"	2.36"	.27	\$4.35
15883 BX	7.25"	4.5"	2.52"	.50	\$7.49

Plastic Project Cabinets

Black plastic project boxes with deep lids. Internal guides on ends & sides for holding PC boards. Includes cover screws.

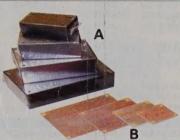
Outside dimensions are listed below.



STOCK #	L"	W"	H"	WT.	1EA
15885 BX	3.74"	1.89"	1.46"	.11	\$3.35
15886 BX	4.53"	2.36"	1.73"	.15	\$3.75
15520 BX	5.3"	3"	1.9"	.25	\$4.95
15887 BX	6.3"	3.74"	2.44"	.33	\$5.95
15888 BX	7.6"	4.53"	2.95"	.45	\$8.95
15521 BX	8.8"	5.5"	3.6"	.75	\$8.95

Plastic Project Cabinets & Perf Boards

Black plastic project boxes with Aluminum lids. Internal posts for holding PC boards, Includes cover & PC board screws. Solderable phenolic Perf. Board has .1" hole grid pattern, copper one side. All dimensions are aprox.



STOCK #	FIG.	SIZE	<u> </u>	W"	D/T"	WT.	1EA
15911 BX	A	Large	5-1/4"	3-1/4"	1-9/16"	.22	\$5.25
15912 PB	В	Large	4-5/16"	3-1/8"	1/16"	.04	\$1.75
15913 BX	A	Medium	4-1/8"	2-5/8"	1-9/16"	.15	\$3.50
15914 PB	В	Medium	3-1/8"	2-1/2"	1/16"	.02	\$1.10
15915 BX	A	Small	3-5/16"	2-1/8"	1-3/8"	.11	\$2.75
16227 PB	В	Small	2-5/16"	1-15/16"	1/16"	.02	\$0.79
15917 BX	A	Mini	2-11/16"	1-11/16"	1-3/16"	.08	\$2.50
15918 PB	В	Mini	1-3/4"	1-1/2"	1/16"	.009	\$0.59
		COLUMN TO SERVICE AND ADDRESS OF THE PARTY O					-

Extruded Aluminum Enclosures

Extruded anodized 6063 aluminum instrument cases with black powder coated, cast aluminum end caps. Internal slots for holding PC board(s), 4 peel-n-stick rubber feet & stainless End Cap screws, IP66 rated when using the accessory Gaskets (sold separately) View Online additional accessories.



STOCK #	COLOR	L"	W"	H"	1EA
32740 BX	Silver	7-3/4"	4-9/16"	2"	\$19.95
32741 BX	Red	7-3/4"	4-9/16"	2"	\$19.95
32742 BX	Blue	7-3/4"	4-9/16"	2"	\$19.95
32743 BX	Black	7-3/4"	4-9/16"	2"	\$19.95





Mini Toggle Switch

Mini toggle switch, Mounts in a 1/4" hole. Solder tab terminals. Rated 6 Amps @ 125VAC.



WT: 02

STOCK #	STYLE	DESC.	1EA
25005-SW	SPST	On-Off	\$0.75
25006-SW	SPDT	On-On	\$0.39
25010-SW	SPDT	On-Off-On	\$0.45
25009-SW	SPDT	(Mom)-Off-(Mom)	\$0.58
25014-SW	DPDT	On-Off-On	\$0.59
25016-SW	DPDT	(Mom)-Off-(Mom)	\$0.79

Mini Toggle Switch

Mini toggle switch, Mounts in a 1/4" hole. Solder tab terminals. Rated 5 Amps @ 125VAC.



WT: .02

STOCK#	STYLE	DESC.	1EA
16071-SW	SPDT	On-(Mom)	\$0.58
16072-SW	SPDT	On-Off-(Mom)	\$0.58
16073-SW	DPDT	On- (Mom)	\$0.69
16074-SW	DPDT	On-Off-(Mom)	\$0.69
16075-SW	3PDT	On-On	\$0.74
16076-SW	3PDT	On-Off-On	\$0.88
16077-SW	4PDT	On-On	\$1.42
16078-SW	4PDT	On-Off-On	\$1.75

SUB-MINI **TOGGLE SWITCH**

Sub-Mini toggle switch, Mounts in a 1/8" hole with Solder tabs. Rated 1 Amp @ 250VAC.



32850-SW SPDT On-None-Off \$0.89 32854-SW DPDT On-None-On \$0.89 On-Off-On 32855-SW DPDT \$0.89

Lighted Pushbutton Switch







Momentary or Alternate Action (Push ON-Push-OFF), SPDT, Full size, metal body, Pushbutton switch with LED lighted Ring around Button. Rated 5A @ 250VAC

Dia: 7/8" Mta: 3/4" hole 1:1-1/2"0/4 WT: 04

STOCK #	DESC.	1EA	
31370-SW	Red Momentary Switch	\$4.95	
31371-SW	Green Momentary Switch	\$4.95	
31372-SW	Blue Momentary Switch	\$4.95	
31375-SW	Red Alternate Action Switch	\$5.95	
31376-SW	Green Alternate Action Switch	\$5.95	
31377-SW	Blue Alternate Action Switch	\$5.95	

Pushbutton Switch



IP-67 rated, CMP #MP19S-F10, Flat Button, Metal Body, SPST-NO, Pushbutton switch. Mounts in a 3/4" hole.

Dia: 7/8" Mtg	:: 3/4" hole L: 1-1/16"O/A WT:	.04
STOCK#	DESC.	1EA
32091-SW	Red Momentary P/B Switch	\$4.95
32092-SW	Green Momentary P/B Switch	\$4.95
32093-SW	Blue Momentary P/B Switch	\$4.95
32094-SW	Gold Momentary P/B Switch	\$4:95
32095-SW	Black Momentary P/B Switch	\$4.95

Full Size 15A Toggle Switch

.25"Quick Connect terminals.

Standard size toggle switch, Mounts in a 15/32" hole, Rated: 10 Amps @ 250VAC. 15A @125VAC.



WT: .03 STOCK # STYLI 18371-SW SPDT On-None-On (Mom)-Off-(Mom) SPDT \$1.95 18372-SW \$1.95 18373-SW DPDT On-None-On 18374-SW DPDT On-Off-On \$1.95 18375-SW DPDT (Mom)-Off-(Mom) \$1.95

Full Size 15A Toggle Switch

Standard size toggle switches, Mounts in a 1/2" hole. Rated: 10 Amps @ 250VAC. 15A @125VAC. Screw terminals.



WT: .08 STOCK # STYLE 16081-SW SPDT On-None-On \$0.88 SPDT 16083-SW On-None-(Mom) (Mom)-Off-(Mom) \$1.05 16085-SW SPDT DPDT \$1.49 16088-SW On-None-(Mom) 16089-SW DPDT On-Off-(Mom) \$1.49 (Mom)-Off-(Mom) 16090-SW DPDT \$1.49

Heavy Duty 20A Toggle Switches

Standard size toggle switches, Mounts in a 1/2" hole. Rated: 15 Amps @ 250VAC. 20A @125VAC. Screw terminals.



WT: .03 STOCK # 33240-SW SPST On-Off SPDT \$1.95 33243-SW On-On 33245-SW SPDT On-Off-On 12219-SW DPST On-Off \$1.95 12221-SW DPDT On-Off-On \$2.50

Misc. Toggle Switches







Full size toggle switch, Amp Ratings are @ 125VAC. 5001: Wire leads 5002: Solder tab 5004 & 12223: Screw

Micg. Hote. 1/2 Hote			44107		
STOCK #	STYLE	DESC.	AMP	1EA	
25002-SW	SPST	On-None-Off	4	\$0.75	
25001-SW -	SPST	On-None-Off	6	\$1.25	
12223-SW	SPST	On-None-Off	10	\$1.25	

Full Size Toggle Safety Covers



Plastic, Snap action safety covers for standard (1/2" Dia.) sized toggle switches. Cover must be opened to activate switch. Closing cover forces switch to original position.

** 10.00
1EA
\$0.69
\$0.69
\$0.69
\$0.69

Switches

Push Button Switch





SPST Mounts in a 1/4" hole N.O. = Normally Open N.C. = Normally Closed

25019 SW | N.O. Red | \$0.29 ea 25020 SW | N.C. Black | \$0.29 ea

Push Button Switch

16093 SW | \$2.02 ea

SPST Normally Open Mounts in a 3/4" hole. Metal Face.



Foot Switch

18150 SW | \$5.95 ea SPST Normally Open Metal petal with 1 meter pigtail.



Metal X-Y Keypad

32340 SW \$4.95 ea

3 X 4 pad with X-Y matrix



X-Y Key Pads

31045 SW | 3x4 pad | \$2.95 ea 31046 SW | 4x4 pad | \$2.95 ea

Peel and stick keypad with bubble type buttons





SP5T Rotary Switch

32597 SW | \$0.99 ea Single pole

5 positions



BCD Thumb Switch

32083 SW | \$0.75 ea 0-9 push button

BCD switch. End plates Available









Panel Meters

Multi Function **AC LCD Panel Meter**

32409 ME | \$19.95 ea 260VAC 20A with internal CT. Volt, Current, Power and Energy Display



Dual Display AC LED Panel Meter

30301 ME | \$19.95 ea 300VAC 100A with external CT. Voltage and Current Display



Dual Display AC LED Panel Meter

33407 ME | \$22.95 ea Din Rail Mount

300VAC 100A with internal CT. Voltage and Current Display



Multi Function AC LCD Panel Meter

32403 ME | \$24.95 ea 260VAC 100A with external CT. Volt, Current, Power and Energy Display



Multi Function AC LED Panel Meter

32404 ME | \$24.95 ea 260VAC 100A with external CT.

Power, Energy, Voltage and Current



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Voltage and Current Display



Dual Display AC LED Panel Meter

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Dual Display AC LCD Panel Meter

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Voltage and Current Display



10-199Hz Frequency AC LCD Panel Meter

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Dual Display DC LED Panel Meter

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3.5-30VDC 5 Digit Panel Meter

32711 ME | \$12.95 ea



Multi Function DC LCD Panel Meter

32541 ME | \$17.95 ea 100VDC 20A with internal Shunt. Volt, Current, Power and Energy Display



Multi Function DC LCD Panel Meter

32542 ME | \$18.95 ea

100VDC 100A with external Shunt. Volt, Current, Power and Energy Display



Mini 3 Digit 4.5-30VDC LED Panel Meter

33065 ME | Red | \$5.95 ea 33066 ME | Green | \$6.95 ea

33067 ME | Blue | \$6.95 ea

LED self powered meter 0.1/.01 Volt resolution auto range 0.56" Character height 5" wire leads. With Bezel.



Mini 3 Digit 4.5-30VDC LED Panel Meter

19598 ME | Red | \$4.95 ea 19599 ME | Blue | \$4.95 ea

19600 ME | Green | \$4.95 ea 5" wire leads. No Bezel. **32961 ME | White | \$5.95 ea**

LED self powered meter 0.1Volt resolution .375" Character height



0-5Amp DC LED Panel Meter

32924 ME | \$8.95 ea

Requires a separate 4.5V-28VDC Power Supply for meter

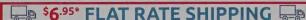
Mini 3 Digit 0-100VDC **LED Panel Meter**

32321 ME | \$3.95 ea

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34657 ME | Red 34658 ME | Green 34659 ME | Yellow 34660 ME | Blue

34661 ME | White

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Mini Rare Earth Magnet 33970 MG \$0.99 ea

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SPST 12VDC

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B

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34929 SW | Green

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